

Attorney Docket No. GMX-002
Appl. No. 10/724,532
Amdt. Dated February 13, 2006
Reply to Final Office Action of December 14, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of the Claims:

1. (Currently amended) An isolated polypeptide comprising the amino acid sequence of SEQ ID NO:1 with at least two amino acid substitutions at [a] two locations selected from the group consisting of Leu-9, Asn-12, Phe-13, Ile-16, Leu-20, Ile-26, Val-27, and Leu-30.
2. (Previously amended) The isolated polypeptide of claim 1, wherein the substitutions are with a non-hydrophobic amino acid.
3. (Previously amended) The isolated polypeptide of claim 1, wherein the substitutions are with an amino acid selected from the group consisting of alanine and glycine.
4. (Previously amended) The isolated polypeptide of claim 3, wherein substitutions are made at Leu-9 and Asn-12.
5. (Previously amended) The isolated polypeptide of claim 1, wherein the polypeptide is linked to a compound to be targeted to a sarco(endo)plasmic region of a cell.
6. (Previously amended) The isolated polypeptide of claim 1, wherein the polypeptide is linked to a macromolecule to be targeted to a sarco(endo)plasmic region of a cell.
7. (Previously amended) The isolated polypeptide of claim 4, wherein the polypeptide is linked to a macromolecule or compound to be targeted to a sarco(endo)plasmic region of a cell.
8. (Previously amended) An isolated polypeptide comprising the amino acid sequence of SEQ ID NO:2.

Attorney Docket No. GMX-002
Appl. No. 10/724,532
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9. (Previously amended) The isolated polypeptide of claim 8, wherein the polypeptide is linked to a compound to be targeted to a sarco(endo)plasmic region of a cell.

10. (Previously amended) The isolated polypeptide of claim 8, wherein the polypeptide is linked to a macromolecule to be targeted to a sarco(endo)plasmic region of a cell.

11. (Previously amended) An isolated nucleic acid comprising a nucleotide sequence encoding the polypeptide sequence of SEQ ID NO:1 with at least two codon substitutions encoding an amino acid substitution at two amino acid locations selected from the group consisting of Leu-9, Asn-12, Phe-13, Ile-16, Leu-20, Ile-26, Val-27, and Leu-30.

12. (Previously amended) The isolated nucleic acid of claim 11, wherein the codon substitutions encodes a non-hydrophobic amino acid

13. (Previously amended) The isolated nucleic acid of claim 11, wherein the codon substitutions encodes an amino acid selected from the group consisting of alanine and glycine.

14. (Previously amended) The isolated nucleic acid of claim 11, wherein the nucleotide sequence is linked to a second nucleotide sequence encoding a protein to be targeted to a sarco(endo)plasmic region of a cell.

15. (Previously amended) An isolated nucleic acid comprising a nucleotide sequence selected from nucleotide sequences represented by SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, and SEQ ID NO:6.

16. (Currently amended) The isolated nucleic acid of claim 15, wherein when the nucleotide sequence is selected from SEQ ID NO:3 and SEQ ID NO:5, the nucleotide sequence is linked to a second nucleotide sequence encoding a protein to be targeted to a sarco(endo)plasmic region of a cell; [or] and wherein when the nucleotide sequence is selected from SEQ ID NO:4 and SEQ ID NO:6, the nucleotide sequence is linked to [a compliment of] a [second] third nucleotide

Attorney Docket No. GMX-002
Appl. No. 10/724,532
Amdt. Dated February 13, 2006
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sequence, wherein the third nucleotide sequence is a compliment of a polynucleotide that encodes [encoding] a protein to be targeted to a sarco(endo)plasmic region of a cell.

17. – 20. Cancelled.

21. (New) A method for targeting a compound or a macromolecule to the sarco(endo)plasmic region of a cell, the method comprising the steps of:

- (1) providing an isolated polypeptide comprising the amino acid sequence of SEQ ID NO:1 with at least one amino acid substitution at a location selected from the group consisting of Leu-9, Asn-12, Phe-13, Ile-16, Leu-20, Ile-26, Val-27, and Leu-30;
- (2) linking the polypeptide to a compound or macromolecule to provide a linked compound or linked macromolecule;
- (3) administering the polypeptide-linked compound or polypeptide-linked macromolecule to cells.

22. (New) The method of claim 21, wherein the substitution is made with a non-hydrophobic amino acid.

23. (New) The method of claim 21, wherein the substitution is made with an amino acid selected from the group consisting of alanine and glycine.

24. (New) The method of claim 21, wherein substitutions are made at Leu-9 and Asn-12.